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IN THE

Supreme Court of the United States

ENTERGY CORPORATION,

Petitioner,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents.

PSEG FOSSIL LLC, *et al.*,

Petitioners,

v.

RIVERKEEPER, INC., *et al.*,

Respondents.

UTILITY WATER GROUP,

Petitioner,

v.

RIVERKEEPER, INC., *et al.*,

Respondents.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

BRIEF OF *AMICUS CURIAE* FOR THE AMERICAN PETROLEUM INSTITUTE IN SUPPORT OF PETITIONERS

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INTEREST OF *AMICUS CURIAE*[1]

The American Petroleum Institute ("API") is a national non-profit trade association headquartered in Washington, DC, which represents over 400 members engaged in all aspects of the petroleum and natural gas industry. API members own and operate existing offshore oil platforms and onshore refinery facilities that use cooling water intake systems that are directly regulated by EPA's final Phase III rule under section 316(b) of the federal Clean Water Act ("CWA"), 33 U.S.C. § 1326(b), the same statutory section that is the subject of this litigation. As such, API's members are affected by and have a strong interest in the question presented to the Court concerning whether EPA can conduct a cost-benefit analysis under CWA § 316(b) in determining the "best technology available for minimizing adverse environmental impact" ("BTA") for cooling water intake structures, and the practical impacts that the Court's holding may have. API frequently represents its members in regulatory and judicial matters involving the CWA.

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[1] Pursuant to Rule 37.6 of the Rules of the Court, API states that no counsel for a party authored this brief in whole or in part, and no such counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than API, or its counsel, made a monetary contribution to its preparation or submission. The parties have consented to the filing of this brief. On June 24, 2008, certain Respondents filed a blanket consent for all amicus briefs. On June 30, 2008, all three Petitioners filed a blanket consent for all amicus briefs. On July 11, 2008, state respondents filed a blanket consent for all amicus briefs. For all other parties, their individual consents are being lodged herewith.

SUMMARY OF ARGUMENT

The API submits this brief in support of the Petitioners' request for reversal of the Second Circuit's decision because: (1) the lower court failed to follow the test this Court established in *Chevron*, (2) complete elimination of cost-benefit analysis from the application of CWA § 316(b) will harm the American economy and consumers by increasing costs of extraction and production of oil and gas in exchange for little or no benefit to aquatic life, (3) acceptance of the Second Circuit's rationale and interpretation of the CWA essentially invalidates another, later Act of Congress and thirty years of regulatory practice, leading to massive regulatory uncertainty under not only the CWA, but every other statute under which administrative agencies regulate, and (4) the Second Circuit's proposed cost effectiveness test would preclude regulatory agencies from regulating in an orderly and efficient fashion.

First, the Second Circuit did not follow *Chevron* and simply substituted its own judgment for EPA's upon the determination that the statute was ambiguous. That decision interpreted CWA § 316(b) as *not* allowing EPA to conduct a cost-benefit analysis when it establishes national uniform standards setting BTA for cooling water intake structures at large, existing power plants.[2] However, the plain language of CWA § 316(b) does not state whether EPA can consider potential technology costs and related effluent reduction benefits, and, in the light most favorable to the Second Circuit's

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[2] The Second Circuit decision is reported as *Riverkeeper, Inc. v. EPA*, 475 F.3d 83 (2d. Cir. 2007).

decision, is ambiguous and subject to multiple, conflicting interpretations concerning the cost-benefit issue. Indeed, the Second Circuit and EPA both interpreted CWA § 316 to reach the exact opposite conclusions. Regardless, the plain language of CWA § 316(b) does not show a clear Congressional mandate prohibiting EPA from considering costs and benefits when establishing the "best" technology available for reducing environmental impacts from cooling water intake structures. As a result, the Second Circuit should have deferred to EPA's reasonable interpretation as required under *Chevron*. Instead, the Second Circuit wholly ignored EPA's interpretation of CWA § 316(b), a statute which EPA administers, and found that the language of CWA § 316(b) clearly establishes that EPA cannot conduct a cost-benefit analysis. In reaching this conclusion, the Second Circuit drew support from the dissimilar language of CWA §§ 301 and 306, and borrowed interpretations of those provisions to bolster its examination of CWA § 316(b). This analysis directly conflicts with the well-established *Chevron* framework, which, if conducted below, would have deferred to EPA's interpretation. The Second Circuit's failure to follow *Chevron* and defer to EPA's interpretation of CWA § 316(b) requires reversal.

API further submits this brief to describe the potential dramatic impacts that the Second Circuit decision may have on the regulated community. Though the Second Circuit overturned the Phase II rule only as it pertains to national uniform standards, and API's members' permits under the Phase III rule are granted with controls using the "best professional judgment" ("BPJ") of individual permitting officials, the Second

Circuit's decision could be misread to include permitting decisions. If the Second Circuit decision is upheld, EPA permit writers confronted with a Supreme Court decision disallowing cost-benefit considerations in setting national uniform standards will likely also conclude that they are prohibited from considering costs and benefits in exercising their BPJ for permit conditions.

It is difficult to overestimate the negative impact to the American economy the Second Circuit's decision will have if it is upheld by this Court and applied to our domestic oil and gas industry. Should the Court order EPA to completely forego cost-benefit considerations in implementing CWA § 316(b), EPA's response will likely be to impose billions of dollars of costs on energy consumers with little or no corresponding environmental benefit. EPA estimated the costs of a conversion to closed-cycle cooling systems for Phase II electrical power plants at up to $200 million per facility, plus a nationwide "social cost" of $3.5 billion *per year*. In the Phase II rulemaking, EPA further recognized that even these high cost estimates could *double* based on the need for Phase II facilities to acquire property needed to construct new cooling towers for the closed-cycle systems.

The economic impact from the application of the Second Circuit's decision to Phase III production and refinery facilities would dwarf the Phase II costs. Forced conversion to closed-cycle systems where needed for Phase III facilities could make domestic gasoline production and refining unprofitable at today's prices or impose massive new energy costs through price

increases. Should this Court uphold the Second Circuit's decision and impose these costs on the industry, the country will likely endure substantial energy cost increases during an already strained economic period. This outcome would be even less defensible because it comes with marginal or no environmental benefits.

Further, the Second Circuit decision, if upheld, will create broad uncertainty for both EPA and the regulated community. Since 1977, EPA and state agencies have been developing standards for facilities based on their BPJ on a site-specific basis. As it made clear before the Second Circuit, during that time EPA, as well as state agencies, weighed costs and related benefits under CWA § 316(b) in setting BPJ standards. The regulated community relied on EPA and state standards based on these cost-benefit analyses in making substantial investments to install compliance measures. By now requiring closed-cycle cooling systems to be installed because EPA purportedly erred in conducting a cost-benefit analysis for the Phase II Rule, facilities will be forced to forfeit their substantial investments to implement other compliance measures. API submits this brief because of its concerns about these detrimental impacts that may result from the decision below.

Finally, if this Court adopts a position that disallows cost-benefit analysis where the statute is silent, the result will be the nullification of an act of Congress—the Regulatory Flexibility Act of 1980 (5 U.S.C. §§ 601-612)—and the overturning of thirty years of bipartisan regulatory policy. The result could be a dramatic reduction in the ability of the Federal government to

regulate effectively. Agencies implementing limited statutory sections such as CWA § 316(b) could be confronted with vocal and litigious advocates, such as the environmental petitioners in the Second Circuit, forcing agencies to adopt absurdly costly regulatory alternatives with little correspondence benefits.

For all of the above reasons, the Second Circuit's decision should be reversed.

BACKGROUND

In the CWA amendments of 1972, Congress enacted CWA § 316(b). 33 U.S.C. § 1326(b). That provision provides the mechanism for EPA to regulate cooling water intake structures. *Id.* CWA § 316(b) provides as follows:

> Any standard established pursuant to section 301 or section 306 of this Act and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact."

Id. Unlike other CWA provisions, CWA § 316(b) relates not to the quality or quantity of discharges to surface waters, but to the "location, design, construction, and capacity of cooling water intake structures"—that is, structures that are constructed in surface water bodies to enable the withdrawal of cooling water. *Id.* CWA § 316(b) does not explicitly provide any language that addresses how or to what extent EPA considers costs and benefits in establishing BTA.

EPA defines "cooling water intake structure" as "the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States." 69 Fed. Reg. 41,576, 41,580 (July 9, 2004). Facilities with cooling water intake structures include power plants and industrial facilities that are constructed near water bodies so they can circulate water through their equipment to cool the heat generated during operations. Over 90 percent of the volume of cooling water withdrawn from surface waters in the United States is used by electric utility generating stations with a total design flow over 50 MGD. 71 Fed. Reg. 35,006, 35,017 (June 16, 2006). Of the many thousands of industrial facilities that withdraw cooling water, EPA estimates that approximately 550 nationwide withdraw 50 MGD or more, and most of these are electrical generation facilities. 69 Fed. Reg. at 41,608. In contrast, there are almost 4,000 offshore oil platforms in the Gulf of Mexico and 150 refineries within the continental United States. *See* Coastal Marine Institute, Forecasting the Number of Offshore Platforms on the Gulf of Mexico OCS to the Year 2023 (April 2001) <http://www.gomr.mms.gov/PI/PDFImages/ESPIS/3/3104.pdf>; Energy Information Administration, *Number and Capacity of Petroleum Refineries*(visited July 18, 2008), *<http://tonto.eia.doe.gov/dnav/pet/pet_pnp_cap1_dcu_nus_a.htm>*.

Offshore platforms extract oil from the geological structures under the ocean floor. Given the danger posed by fire and explosions in drilling through gas and oil pockets, offshore platforms generally use ocean water primarily for fire suppression and cooling operations. Offshore platforms also use ocean water for cooling any

drilling operations. EPA Technical Development Document for the Final Section 316(b) Phase III Rule, pp. 2-8 – 2-10 (EPA-821-R-06-003). These operations generally use very little ocean water in comparison with the amounts used by onshore electrical generation facilities. 71 Fed. Reg. at 35,017. Similarly, onshore oil refineries also use cooling water primarily for cooling drilling and fire suppression. Refineries use much less water than electrical generation facilities. Onshore refineries are inherently dangerous facilities. Crude oil molecules are "cracked" at extremely high temperatures and pressures in massive containers, to produce gasoline, kerosene, lubricants, and all the petroleum products modern society requires to function. Cooling water is used to maintain production equipment at proper operating temperatures, which, among other things, ensures proper safety at the refineries.

The primary environmental impact from cooling water intake structures is that they "impinge" and "entrain" aquatic organisms, from the smallest plankton, fish, eggs, and larvae to the largest adult fish. "Impingement" is when organisms are trapped against intake structures by inflowing water, which can cause physical injury; "entrainment" occurs when smaller organisms are pulled into a facility's cooling system, which can cause injury from exposure to the facility's operations. *Id.* at 41,586. Because of these impacts on aquatic life, the Phase II Rule was promulgated "to minimize the adverse environmental impacts of cooling water intake structures by minimizing the number of aquatic organisms lost as a result of water withdrawals associated with these structures or through restoration measures that compensate for these losses." *Id.* at 41,586.

There are three primary technological systems for cooling at electric utilities and industrial facilities: once-through, closed-cycle, and air/dry. "Once-through" cooling systems used by most existing plants are more cost-effective and energy-efficient than "closed-cycle" cooling systems, which recirculate water through cooling towers, or "air/dry" cooling systems that use virtually no water. Once-through systems, however, require a larger volume of intake water, which can potentially have a more significant impact on aquatic life. Regardless of the volume of water withdrawn by a particular type of cooling system, there are other practical and environmental considerations. For example, closed-cycle and air/dry cooling systems can be extraordinarily more expensive than once-through cooling, requiring, in the case of closed-cycle systems, existing facilities to install retrofit systems that can reduce electric generating capacity, which leads to an "energy penalty" while the retrofit is installed. Also, closed-cycle and air/dry cooling systems require more electricity to operate and create additional adverse environmental impacts such as increased air pollutant emissions resulting from greater use of fossil fuels. *Id.* at 41,605.

API's members were regulated by EPA under the Phase III rule issued on June 16, 2006, whereas electrical generation facilities were regulated under the Phase II rule, issued on July 9, 2004. The Phase II Rule covers approximately 90 percent of the total volume of cooling water withdrawn by all facilities nationally. 71 Fed. Reg. at 35,017. In promulgating national standards for the Phase II Rule based on BTA, EPA determined that Phase II facilities could choose from five technology alternatives for

achieving the BTA "to provide a significant degree of flexibility to Phase II existing facilities, to ensure that the rule requirements are economically practicable, and to provide the ability for Phase II existing facilities to address unique site-specific factors." 69 Fed. Reg. at 41,590. EPA found that Phase II facilities should have the choice of the five alternatives to satisfy BTA because adoption of a single technology standard for all Phase II facilities was not practicable. *Id.* Instead, EPA determined that the "range of technologies" was "commercially available" for the industry and the most appropriate approach for addressing the variability among Phase II facilities. *Id.* at 41,599. The Phase II Rule also set forth national performance standards that consist of "ranges of reductions" that facilities must achieve in impingement or entrainment from a "calculation baseline." *Id.* at 41,683-84, 41,590.

EPA determined that "closed-cycle, recirculating cooling systems" did not represent the single BTA for Phase II facilities based on its "high costs (due to conversions), the fact that other technologies approach the performance of this option, concerns for energy impacts due to retrofitting existing facilities, and other considerations." *Id.* at 41,605. EPA found that requiring closed-cycle cooling retrofits at Phase II facilities "is not the most cost-effective approach," and that "retrofits may be *impossible* or not economically practicable." *Id.* (emphasis added). Specifically, EPA reviewed evidence showing that the costs of closed-cycle retrofits would be exceedingly high-ranging per facility, from an estimated $130 to $200 million in capital costs and $4 to $20 million in annual operating costs. *Id.* Indeed, "EPA estimated that the total social cost of compliance for this

option for Phase II existing facilities would be approximately $3.5 billion per year." *Id.* EPA then found that actual costs could be "at least twice those projected" because its estimates "did not fully incorporate costs associated with acquiring land needed for cooling towers, and, therefore, these estimates may not fully reflect the costs of the option." *Id.*

EPA also considered information about the energy impacts associated with closed-cycle retrofits. This included EPA's finding that if Phase II facilities were required to install closed-cycle cooling systems, the Department of Energy estimated "on average 20 additional 400-MW plants might have to be built to replace the generating capacity lost by replacing once-through cooling systems with wet cooling towers if such towers were required by all Phase II facilities." *Id.* Moreover, EPA found that because that "deficit is predicted to occur during the summer months (when energy demand is highest), the net effect would be more consumption of fossil fuel, which in turn increases the emission of sulfur dioxide, NO[X], particulate matter, mercury and carbon dioxide." *Id.* EPA found it appropriate "to consider these non-water quality environmental impacts and the additional costs associated with controlling these increased emissions in" issuing the Phase II Rule. *Id.*

EPA determined that it was authorized to conduct a cost-benefit analysis in establishing BTA under CWA § 316(b). While EPA looked to CWA §§ 301 and 304 to a limited extent, EPA also explained the differences between those provisions and CWA § 316(b). 69 Fed. Reg. at 41,583. EPA found that in contrast to

CWA §§ 301 and 304, the object of BTA "is explicitly articulated by reference to the receiving water: To minimize adverse environmental impact in the waters from which cooling water is withdrawn." *Id.* Because of the differences in the language of the CWA provisions, EPA explained that they were implemented differently:

> While EPA has established effluent limitations guidelines based on the efficacy of one or more technologies to reduce pollutants in wastewater in relation to cost without necessarily considering the impact on the receiving waters, EPA has previously considered the costs of technologies in relation to the benefits of minimizing adverse environmental impact in establishing 316(b) limits which historically have been done on a case-by case basis.

Id. Thus, EPA concluded that "[f]or this Phase II Rulemaking, EPA . . . interprets CWA section 316(b) as authorizing EPA to consider not only technologies but also their effects on and benefits to the water from which the cooling water is withdrawn." *Id.* Based on its cost-benefit analysis, EPA established in the Phase II Rule "national requirements for facilities to install technology that is technically available, economically practicable, and cost-effective while at the same time authorizing a range of technologies that achieve comparable reductions in adverse environmental impact." *Id.*

In the Phase III rule, EPA determined that national uniform standards for implementing BTA among the widely varied smaller facilities was not

appropriate. EPA found that the cost of establishing a single, uniform standard for existing onshore refineries and offshore rigs was wholly disproportionate to any environmental benefits, and decided to provide permit writers with the authority to make case-by-case decisions on the BTA for a particular facility. 71 Fed. Reg. at 35,014-17.

ARGUMENT

The sole question raised by the Court is whether EPA can compare costs and benefits under CWA § 316(b) in establishing BTA for cooling water intake structures. The Second Circuit incorrectly denied EPA's ability under CWA § 316(b) to consider cost and benefits in determining a reasonable regulatory approach, stating that "[w]hen Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute," and that EPA may only consider regulatory costs to the extent that an industry can "reasonably bear" technology costs and the technology is "cost effective." *Riverkeeper, Inc. v. EPA*, 475 F.3d 83, 99-100 (2nd Cir. 2007). The Second Circuit's decision must be overturned because: (1) the court improperly substituted its own interpretation of an arguably silent statutory section for an agency's permissible interpretation; (2) the Second Circuit's interpretation of the CWA is likely to cause immediate massive harm to the domestic petroleum industry, American consumers, and the U.S. economy, in exchange for little to no benefit to aquatic life; (3) the Second Circuit's decision would essentially invalidate a later Act of Congress and reverse close to thirty years of regulatory policy by that uses common sense and cost-

benefit analyses in favor of an ill-defined and impracticable analysis forwarded by one panel of one Circuit Court of Appeals; and (4) the Second Circuit's proposed cost effectiveness test would preclude regulatory agencies from regulating in an orderly and efficient fashion.

I. CWA § 316(b) authorizes EPA to compare costs and benefits for determining BTA.

EPA's interpretation of the phrase "best available technology for minimizing adverse environmental impacts" is that it authorizes EPA to consider, in establishing standards for cooling water intake structures based on such technology, the relationship of the costs of the technology options to the benefits associated with them. 69 Fed. Reg. at 41,583, 41,603. The Second Circuit ignored EPA's interpretation of CWA § 316(b), and instead read non-existent language into CWA § 316(b) prohibiting EPA from considering costs and benefits. *Riverkeeper*, 475 F.3d at 98-99. A proper *Chevron* analysis, however, shows that the Second Circuit should have deferred to EPA's reasonable interpretation of CWA § 316(b), a statute that is silent concerning the question at issue.

Under *Chevron*, if the intent of Congress is clear from the statute, then the Court must give effect to that intent. *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 842 (1984). But, if "the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id.* at 842-43. The plain language of CWA § 316(b) is silent concerning whether

or how EPA is permitted to weigh costs (or indeed, any other factor) when determining BTA. Indeed, the Second Circuit recognized the statute's silence on this issue: "Section 316(b) does not itself set forth or cross-reference another statutory provision enumerating the specific factors that the EPA must consider in determining BTA." *Riverkeeper*, 475 F.3d at 97.

Despite its recognition of the absence of language in CWA § 316(b) that would prohibit EPA from considering costs or conducting a cost-benefit analysis, the Second Circuit held that "the language of section 316(b) itself plainly indicates that facilities must adopt the *best* technology available and that cost-benefit analysis cannot be justified in light of Congress's directive." *Id.* at 98-99 (emphasis in original). However, a critical examination of CWA § 316(b) shows that its language is silent or, at best, ambiguous, considering EPA's reasonable interpretation to the contrary. The Second Circuit's interpretation ignores that CWA § 316(b) not only lacks a directive to EPA about how it is to consider costs of technology, but it contains an affirmative provision that EPA consider not only available technology, but also what is "best" for "minimizing adverse environmental impact." This language distinguishes BTA from almost all other CWA standards, that typically focus on the feasibility of technology, and instead focuses on environmental impacts. The Second Circuit mistakenly read the language of CWA § 316(b) as "expressly requir[ing] a technology-driven result . . . , not one driven by cost considerations or an assessment of the desirability of reducing adverse environmental impacts in light of the cost of doing so." *Id.* at 99. However, the Second Circuit

only focused on the words "best technology available," failing to recognize that "minimizing adverse environmental impact" modifies the first three words of BTA. *Id.* In comparison to the Second Circuit's incomplete interpretation, a proper construction of CWA § 316(b) permits EPA the discretion to weigh costs and benefits in determining whether a technology for a cooling water intake structure is the "best . . . achievable" allowing for consideration of costs, while also determining such technology minimizes adverse environmental impact, thus allowing EPA to consider environmental benefits. Thus, the Second Circuit erred in finding that the plain language of CWA § 316(b) clearly sets forth a Congressional mandate prohibiting EPA from conducting a cost-benefit assessment.

Because the language of CWA § 316(b) does not unambiguously state Congress' intent on the cost-benefit issue under step one of the *Chevron* analysis, the Second Circuit should have deferred to EPA's interpretation of the statute. For the Phase II Rule, EPA interpreted CWA § 316(b) as allowing for a consideration of "the national cost of . . . technologies in comparison to the national benefits . . ." 69 Fed. Reg. at 41,603; *see also id.* at 41,583. Because CWA § 316(b) does not expressly prohibit EPA from comparing costs and benefits in establishing BTA, the Second Circuit should have deferred to EPA's interpretation so long as it was reasonable. *Chevron*, 467 U.S. at 843. As thoroughly discussed in briefs submitted by other parties, including EPA itself, EPA's interpretation of CWA § 316(b) as allowing it to compare costs and benefits in establishing BTA was reasonable. The text of CWA § 316(b) supports EPA's reasonable interpretation, which states that

intake structures "reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. § 1326(b). This language, unique to the CWA, combines technology considerations ("best technology available") with environmental goals ("minimizing adverse environmental impact."). As a result, EPA reasonably interpreted CWA § 316(b) to grant it the authority to consider technology costs in relation to environmental benefits, such as related reductions in impingement and entrainment for the Phase II facilities. 69 Fed. Reg. at 41,603. Because it failed to conduct a proper *Chevron* analysis that defers to EPA's reasonable interpretation of CWA § 316(b), the Second Circuit decision should be reversed.

II. If upheld, the Second Circuit's decision is likely to lead to major impacts on our nation's energy supply.

If the Second Circuit's decision is upheld, EPA's cost-benefit analysis for the Phase II Rule is invalidated, and closed-cycle cooling systems are imposed on Phase II and III facilities as BTA, the practical implications will be broad and substantial on the already-strained energy industry. If closed-cycle systems are imposed as BTA, the oil and gas industry could likely be required to retrofit existing refineries and existing offshore oil platforms. Requiring a possible shut down of either one of these to retrofit systems would impose costs on the oil and gas industry that would necessarily be passed on to consumers and harm the American economy. Finally, reversing EPA's use of cost-benefit analysis in establishing BTA over the last thirty years will lead to regulatory uncertainty and unnecessary expenditures.

First, retrofitting an oil refinery with closed-cycle cooling water systems may require a shutdown of the entire refinery, which will not only raise costs for the refinery, but could reduce the supply of gasoline and other products to consumers. Just the cost of adding a cooling tower to a refinery to support closed-cycle cooling, even ignoring any costs imposed through closure of the refinery for ten months, is likely to be high, at possibly over $6,000,000 per unit. Again, this estimate includes only the construction of the unit. The significant cost would be required because the typical petroleum refinery is a complex system of process components that evolved over decades. Designers provided heat removal systems based upon the needs of the individual components and the available cooling utilities. Changing once-through cooling systems to recirculating systems will involve site-specific piping and equipment location issues that may not be apparent to those more familiar with power plants. Each refinery component may have several different heat transfer needs, ranging from pump cooling to steam eduction-generated vacuum. If the cooling tower can provide similar cooling capacity, then the process heat exchangers will not need replacement. The problem is that the temperature difference provided by once-through cooling is not readily replicated with cooling tower-based systems. Consequently, the complex nature of a petroleum refinery will demand site-specific cooling system designs having multiple cooling towers (possibly placed far away from the process unit), the replacement of pumps, and/or the replacement of process heat exchangers (and possible associated piping, depending upon system hydraulics). Moreover, not only are design challenges daunting for refineries, but space restrictions

can increase construction costs exponentially. For example, in the Phase II Rule, EPA recognized that acquisition of property for siting cooling towers could result in costs "at least twice those projected by EPA." 69 Fed. Reg. at 41,605. This issue would equally apply to Phase III facilities.

However, the construction costs are not the largest costs this changeover imposes. In addition to the massive refinery construction costs that would be passed on to consumers, closing even a handful of these at any one time could have massive impacts on the American economy and the supply of gasoline and energy. There are only about 150 refineries in the United States to refine the gasoline and other petroleum products, and those that are in operation are already ruling at full capacity to satisfy consumer demands. Energy Information Administration, *Number and Capacity of Petroleum Refineries*(visited July 18, 2008), *<http://tonto.eia.doe.gov/dnav/pet/pet_pnp_cap1_dcu_nus_a.htm>*. With regards to offshore platforms, a sizable percentage of U.S. domestic production may be shut down for months on end while offshore cooling water systems are reconfigured to specifications designed for onshore electrical generation facilities a couple hundred times their size. Since the companies operating offshore platforms are so large, it is not likely that even the costs of converting offshore platforms would meet the Second Circuit's test of not being able to be "reasonably borne" by the industry. Of course, the economic harm to this country could be massive.

As EPA noted in its Phase II rulemaking, retrofitting closed-cycle systems is no small task, and EPA found that an electrical plant could be down for *up to ten months* while performing necessary construction. 69 Fed. Reg. at 41,605. API agrees with this ten-month downtime estimate. In fact, as API explained in 2005 in response to EPA's request for comments on a rule that would only require retrofitting screens and intakes, not installing cooling towers:

> Petroleum refineries are not designed or operated on the basis of taking periodic routine shut downs. The experiences of emergency shut-downs of refineries due to recent hurricanes explains why shutting down refineries is to be avoided. Typically, a refinery runs 24 hours per day, 7 days per week. Usually, turnarounds are performed on individual process units, while most of the remainder of the refinery remains in operation. In addition, at least one API member's intake structure also provides water to a municipality; this water supply would be curtailed to accomplish the retrofit. Therefore the demand for cooling water at the intake structure is nearly always continuous.
>
> Refineries rarely have suitable alternate [cooling water intake structures]. If retrofit of the intake structure were required, in many cases essentially complete shutdown would be necessary during the installation of a modified intake structure. In each of these cases, API estimates that retrofitting an intake

> structure would typically result in 8 weeks of lost production. For the 13 petroleum refineries potentially subject to Phase III (those with cooling water flows >50 mgd), estimated downtime and lost production time would total approximately 100 weeks.

API, *Comments to Docket OW-2004-0002*, at 5-6 (Dec. 27, 2005). Of course, the eight-week estimate only includes the retrofitting of existing refinery equipment such as intake screens, pipes, and circulation. This estimate does not include the actual construction of necessary new cooling towers or equipment for closed-cycle circulation. It will be necessary for refineries to actually build new towers to implement closed-cycle cooling. API believes that refinery downtime is likely to be in the range of ten months, as EPA previously found, representing a potentially major decrease in gasoline and diesel production, along with comparable losses of other vital petroleum products. During the time refineries were closed for turnaround, they would not be producing any petroleum products. The production stoppage could likely apply to virtually all of this country's domestic gasoline and petroleum refining facilities. In addition, a large number of offshore oil platforms may need to be shut down for conversion. Yet, the Second Circuit's decision would preclude EPA from weighing the costs its regulation could impose against a small benefit to aquatic life.

Finally, adopting the Second Circuit's elimination of cost-benefit analysis in establishing BTA for the Phase III rule would create broad uncertainty for both EPA and the regulated community. After the Fourth

Circuit invalidated EPA's first attempt to implement CWA § 316(b) in *Virginia Electric & Power v. Costle*, 566 F.2d 446 (4th Cir. 1977), EPA and state agencies implemented CWA § 316(b) by developing standards site-by-site, based on their "best professional judgment." 69 Fed. Reg. at 41,584. While EPA and state agencies issued site-specific standards for cooling water intake structures, in 1979, the First Circuit confirmed that CWA § 316(b) authorizes EPA to weigh costs against environmental benefits. *Seacoast Anti-Pollution League v. Costle*, 597 F.2d 306, 311 (1st Cir. 1979). As EPA made clear in the Phase II Rule, it was operating consistent with the interpretation that it was authorized to conduct a cost-benefit analysis. The regulated community relied on EPA's interpretation, and based on the standards issued by EPA and state agencies based on site-specific BPJ, Phase II facilities made substantial investments over the last thirty years to install compliance measures. The Second Circuit's decision, however, would require Phase II facilities to forfeit those investments. The loss of those investments makes the cost of installing closed-cycle systems especially daunting, and would likely lead Phase III facilities to conclude that EPA's regulatory actions could not be relied upon.

III. Overturning existing common-sense regulatory law and policy in favor of the Second Circuit's undefined tests would lead to substantial uncertainty under every regulatory statute.

The Second Circuit provided very little guidance to agencies on how to implement its potentially wide-sweeping decision, and upholding its decision on cost-benefit analysis would effectively invalidate thirty years of common-sense regulatory policy in favor of a vague test for what costs can be "reasonably borne" by an industry that the court itself was unwilling to define clearly. In its decision, the Second Circuit appears to have concluded that unless a statute specifically provided for cost-benefit analysis, such analysis would be prohibited. *Riverkeeper*, 475 F.3d at 99. According to the Second Circuit, the only limit on what technology EPA is required to mandate is whether industry can bear the costs. Yet, in its zeal to "force" technology, the Second Circuit declined to even define the vague term "reasonably borne" from its own proposed test. The Second Circuit simply did not explain whether EPA would be permitted to reject a regulatory option that put 5% of an industry out of business, or whether it must engage in "technology forcing" until it was shown that only a handful of firms would remain. *Id.* The Second Circuit has attempted to push aside thirty years of cost-benefit analysis and common sense regulatory policy in favor of forcing the agencies into decades of litigation on the meaning of the word "reasonable" in the various circuits.

The sole guidance the Second Circuit gave to a regulatory agency is to state that the only consideration

the agency could give to costs would be to determine "cost-effectiveness." The Second Circuit's decision appears to continue to mandate each and every technological upgrade that an agency has determined the industry could "reasonably" bear. However, if an agency identified a technological option that had identical benefits at a lower price, it could opt for the lower price technology. Here, the court was very clear, stating that EPA could not reject a regulatory alternative that saved *two additional fish* on cost considerations. *Id.* at 100. In the Second Circuit's opinion, a section of the CWA that is silent on cost-benefit analysis requires EPA to impose billions of dollars in regulatory costs for the projected saving of two fish.

In assessing the unreasonableness of the Second Circuit's sweeping holding, it is helpful to examine current regulatory policy. Currently, in the face of statutes silent on the question of cost-benefit analysis, agencies are required by law to consider the impacts of their actions. Specifically, the Regulatory Flexibility Act of 1980 (the "RFA"), required EPA to consider the costs of its CWA § 316(b) rules to small entities.[3] 5 U.S.C. §§ 601-612. Though the RFA does not "trump" the

[3] In fact, pursuant to section 609 of the RFA, EPA determined the Phase III cooling water intake rule was likely to have a significant economic impact on a substantial number of small entities and conducted a Small Business Review Enforcement Fairness Act panel prior to publication. *See* U.S. Small Business Administration, Office of Advocacy, *SBREFA Panel Support for Cooling Water Phase III Regulations Under Section 316(b) of the Clean Water Act: Final Report* (Jan. 9, 2004) (EPA-HQ-OW 2004-0002-02221).

legislative goals EPA is regulating for, Congress clearly intended that EPA at least consider the costs of the regulatory burdens it is imposing and alternative regulatory approaches to reduce those costs. 5 U.S.C. § 606 ("The requirements of sections 603 and 604 of this title do not alter in any manner standards otherwise applicable by law to agency action."); *see, e.g., A.M.L. International, Inc. v. Daley*, 107 F. Supp. 2d 90, 105 (D. Mass. 2000) ("The RFA does not command an agency to take specific substantive measures, but rather, only to give explicit consideration to less onerous options."). However, the Second Circuit appears to have concluded that a silent statutory section that makes no mention of consideration of costs must be read to mean that RFA analysis is meaningless.

Section 604 of the RFA requires EPA to publish along with their final rules in the *Federal Register* a discussion outlining the types of small entities being regulated, the estimated compliance burdens, as well as less burdensome regulatory alternatives. 5 U.S.C. § 604. EPA must also publish, along with its proposed and final rules, "a description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record." 5 U.S.C. §§ 603(b)(4), 604(a)(4). Having determined the likely regulatory burdens, EPA is then required to provide with its final rules:

> [A] description of the steps the agency has taken to minimize the significant economic

> impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

5 U.S.C. § 604(a)(5). EPA decisions to reject less burdensome regulatory alternatives are subject to judicial review under the RFA, and challenges to regulatory actions can be brought by any adversely affected small entity who believes EPA failed to conduct the requisite regulatory flexibility analysis. 5 U.S.C. § 611(a), *see U.S. Telecom. Ass'n. v. FCC*, 400 F.3d 29, 42-43 (D.C. Cir. 2005) (court found substantial compliance with APA notice and comment requirements, but still remanded rule based on failure to conduct regulatory flexibility analysis).

In a legal challenge brought under the Administrative Procedure Act (the "APA"), EPA would understandably be hard-pressed to defend the Second Circuit's proposed cost-effectiveness test in any other Circuit Court of Appeals. Though this Court's *Chevron* standard and the "arbitrary and capricious" standard from the APA generally provide deference to agency decision making (*see Chevron*, 467 U.S. at 842-45; 5 U.S.C. § 706), it would be difficult for a court that did not accept the Second Circuit's rationale for interpreting statutory silence as prohibiting cost-benefit consideration to determine that EPA was not acting arbitrarily if the agency acted exactly as the Second

Circuit urged. First, in determining that a technology cost could be "reasonably borne," the Second Circuit apparently would make no distinction for cases where the largest company in an industry could reasonably bear a cost that would force every small competitor out of business. Consideration of regulatory alternatives under the RFA would become a meaningless act under a judicially-created test with no explicit statutory support.

It is instructive to note that the Second Circuit failed to explain how its cost-effectiveness test would work in reality. The Second Circuit stated that EPA would not be permitted to adopt a technology that failed to save *two fish* more than a test with even significantly less costs, provided EPA had made a prior determination that the industry could "reasonably bear" the costs of the technology. *Riverkeeper*, 475 F.3d at 100. This test is profoundly disconnected with the real world impacts of regulation, as no reasonable, uninterested party would dare to say that an EPA decision to destroy every smaller competitor in a market on behalf of *two fish* was not arbitrary and capricious. Yet, the Second Circuit's choice of example explicitly puts EPA agencies on notice that even reasonable regulatory alternatives will be overturned as impermissible under the court's new cost-effectiveness test.

In addition, the Second Circuit's decision contravenes almost thirty years of regulatory policy. Since 1981, Federal agencies have been required by Executive Order to apply a cost-benefit analysis of to some degree to their regulatory decisions. On February 17, 1981, one of President Reagan's first acts of office

was to sign Executive Order 12,291 requiring Federal agencies to use the common sense principle that, "Regulatory action shall not be undertaken unless the potential benefits to society for the regulation outweigh the potential costs to society." Exec. Ord. 12,291, at §2(b), 46 Fed. Reg. 13,193 (1981). In a display of the bipartisan nature of this common sense measure, in his first year in office, President Clinton signed Executive Order 12,866, continuing cost-benefit analysis in regulation and even creating an oversight mechanism to ensure this occurred. Exec. Ord. 12,866, 58 Fed. Reg. 51,735 (1993). The Second Circuit's decision steps squarely into the realm of the Executive, ordering the President to interpret statutes that are silent on cost-benefit analysis in the manner that the court prefers.

Given the serious potential for regulatory confusion and legal difficulties present in implementing the Second Circuit's decision, this Court should refrain from upholding the Second Circuit decision to the extent that it purports to prohibit cost-benefit analysis unless specifically granted in the authorizing statute. To the extent that this Court finds the Second Circuit's analysis and interpretation of CWA § 316(b) acceptable, API urges the Court to limit its holding to only implementation of CWA § 316(b).

IV. A general prohibition on regulatory decisions based on cost-benefit analysis would destroy the ability of regulatory agencies to regulate in an orderly and efficient fashion.

Though API believes the Second Circuit's interpretation of the CWA was not proper under this Court's prior decisions, API strongly urges this Court to limit any decision upholding the Second Circuit's decision to the confines of CWA § 316(b) only. API's members are regulated not only under the CWA, but under the numerous other environmental, health, safety, and economic statutory schemes. If this Court accepts the general holding of the Second Circuit on cost-benefit analysis and proper statutory interpretation, without limitation to the CWA, there is no limit to the disruption that such a rule could cause. Two outcomes would necessarily occur, should this Court accept the Second Circuit's rationale and adopt the general rule that unless a statute mandates cost-benefit analysis, such analysis is prohibited: (1) regulatory agencies will interpret the Second Circuit's "reasonably borne" cost limitation as an order to regulate such that industry spend every penny of profit to reach that particular agency's narrow regulatory goal; and/or (2) executive authority to implement statutes will be taken over by the courts, as there will be endless litigation by special interest groups claiming that agencies do not have authority to give industry a break for any marginal cost, where regulatory benefits are potentially available. In 2005 alone, the Federal government published 3,980 final rules, many of which are silent as to cost factors and may have to ignore cost considerations under the Second Circuit's rationale. *See* Office of Management

and the Budget, Office of Information and Regulatory Affairs, *2006 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*, at 7 (2006) (visited on July 18, 2008) <*http://www.whitehouse.gov/omb/inforeg/2006_cb/2006_cb_final_report.pdf*>. Just the 2005 final rules imposed annual regulatory costs of between $4,329,000,000 to $6,597,000,000, even after the agencies were forced to consider costs and regulate in a common sense manner. *Id.* If the Second Circuit decision was followed, those costs would likely have been much higher.

Regulated companies have few choices when faced with regulatory costs. They can try to absorb the costs, or, in cases like this where the entire industry is being regulated, they can raise prices and pass costs to consumers. Yet, there is a limit to what the market will bear. When one reviews just how many statutory grants of regulatory authority are silent on the issue of cost-benefit analysis, the inevitable conclusion is that there simply is not enough money to satisfy all of the agencies' regulatory priorities without comparing costs and benefits. This Court's decision has the potential to influence outcomes far beyond the scope of the minor statutory section of CWA § 316(b), and API urges this Court to tailor its final opinion in a way that takes into account the sheer size of the regulatory state.

CONCLUSION

For the foregoing reasons, the judgment below should be reversed.

Respectfully submitted,

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